



Member Success Case Study | Written By: Audrey Woods

Einblick

One recurring theme in computer science is the challenge of data processing. These days, companies don't suffer from a lack of data but rather an abundance. One can find data everywhere: in customer interactions, sales numbers, manufacturing statistics, market analysis, etc.

The trick becomes how to effectively apply this almost-infinite resource, especially among employees who don't have computer science degrees or coding experience. How, for example, can a computer engineer discuss results with coworkers without the time-consuming back-and-forth of emails, calls, and meetings companies currently rely on? Is it possible to explore analysis possibilities in real-time between experts and non-experts?

MIT CSAIL Alliances Startup Connect member [Einblick](#) offers an answer with their canvas-style data workflow interface. Through Einblick, users can access a visual, collaborative platform that allows companies to process and apply their data at the speed of thought.

GETTING THEIR START

As co-founder and CEO Emanuel Zraggen tells it, Einblick began as a research project, specifically part of his PhD research at Brown University. He describes how early on his lab "got these large interactive whiteboards sponsored by Microsoft" which inspired him to think about what could be done with what were essentially large iPads. Right away, he and his fellow researchers realized that one potential use for so much screen real estate was to visualize data.

Recognizing that he needed more expertise in database management, Dr. Zraggen got in touch with Professor [Tim Kraska](#), who was a new faculty member at Brown University at the time before he became an MIT professor in 2018. Together they embarked on a mission to "make data more accessible [and] easier to use with large datasets." When Professor Kraska migrated to MIT, Dr. Zraggen followed as a post-doc to continue the exciting research.

This project, then called [Northstar](#), got early funding from DARPA, which demonstrated a market need for their idea. Dr. Zraggen explains, "[DARPA] wanted to make data science more accessible. They had lots of data in the government but not enough trained data scientists, [so] they were looking for ways to basically empower the existing workforce they have to be more powerful working with data."

The research soon reached a point where the academic questions were answered and the research was more or less "complete." Dr. Zraggen describes this "crossroads" as a choice between "letting it die out as an academic prototype or seeing if we can spin it out into a company." But Dr. Zraggen felt invested in the idea and didn't want to let it die. "I wanted to see how far we can take it," he says. In late 2019, along with co-founders Benedetto Buratti, Dr. Philipp Eichmann, Zeyuan Zhang, and Professor Kraska, Dr. Zraggen began to talk to venture capital investors and they launched the company in early 2020, naming it after the German word for "insight." Thus, Einblick was born.

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AN EASIER WORKFLOW WITH DATA

Expanding on their Northstar technology, Dr. Zgraggen, Professor Kraska, Buratti, Dr. Eichmann, and Zhang created an interface that makes data science accessible to a broad range of clients and allows users to iterate problems much faster and in real-time. As Dr. Zgraggen said in a [previous interview](#) about the startup, “the way to think about it is it’s like a big interactive whiteboard where you can lay out your data analysis or your data science workflows, you can share it easily with other people, you can collaborate, [and] multiple people can jump in virtually in the same canvas and work together over data.” This design allows users to simultaneously work on the same screen and the same dataset in a nonlinear way, advantages which make Einblick unique in the market of dataflow solutions.

However, Einblick had a challenge to solve beyond the creation of a collaborative canvas, and that’s the inevitable time data processing demands. They wanted to offer a fluid experience where users could have a real-time dialogue and run several different questions on their data without having to pause and wait for results. To solve this, they developed a special processor called a “[progressive approximation engine](#),” which works over a small sample of the data, offers a nearly immediate result, and then continues to generate more and more accurate results in the background. This allows users to quickly see what’s happening in their data without getting bogged down waiting for final results.

Another feature of Einblick is what they call “[drag and drop analytics](#),” or an interface explicitly designed to allow non-experts to run common machine learning tasks. Where most modern data processing relies on a bevy of disconnected programs, slowing down the workflow and confusing the inexperienced, Einblick’s model includes a full stack of commonly used tools that make computer science accessible to everyone, not just data scientists. They’re also trying to “eliminate a lot of the repetitive and mundane aspects of data science,” Dr. Zgraggen says, explaining how Einblick’s “built-in tools [can] help you solve common data science tasks really quickly.”

With a heavy focus on user experience and interface approachability, Dr. Zgraggen says Einblick offers a “general purpose data science platform [that] applies almost anywhere.”

CSAIL ALLIANCES: EVENTS, RECOGNITION & HIRING

Early on, one of the ways Einblick spread their name was to create a conference centered around data science. As Dr. Zgraggen explains, they wanted to build a long-term community and “get people together to talk about data and the concept of citizen data science.” The [Citizens Data Science Summit](#) came about in September, 2021. Since it was their first time organizing such a large event, they connected with CSAIL Alliances to spread the word, bring together speakers, and help with marketing. Dr. Zgraggen says the CSAIL Alliances team was “super helpful in getting the CSAIL community involved [and] helped us get this in front of people and out in their newsletters.” When asked if he’d organize another event like the Summit, Dr. Zgraggen answers, “we’re definitely interested in doing this again.”

Beyond the Citizens Data Science Summit, Dr. Zgraggen says CSAIL Alliances offers Einblick visibility that they wouldn’t otherwise have. For example, he described meeting with a potential investor recently who recognized him from a CSAIL Alliances showcase years earlier. “People who saw us there recognize us now,” Dr. Zgraggen says, adding that “**some of our earliest adopters came through CSAIL Alliances**,” such as the BMW group. He adds that the industry connections Einblick made through Alliances were “instrumental in the early days to make sure what we were building actually made sense.”

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CSAIL ALLIANCES: EVENTS, RECOGNITION & HIRING *(continued)*

Finally, Einblick is excited to leverage another advantage provided by their Startup Connect membership: hiring. Laughingly, Dr. Zraggen explains how unexpected the hiring challenges were to him and his fellow co-founders. “When you’re at MIT, there are hundreds of brilliant students that can’t wait to join an interesting research project. But in the real world, there are thousands of small startups and if you’re an unproven young startup, it’s actually really hard to hire good people.” Because of this, Einblick is “absolutely” going to use their link to CSAIL for recruiting, citing how, at an institution like MIT, it’s **“easy to get access to great talent and smart folks.”**

Generally, Dr. Zraggen feels that their membership is valuable because **“CSAIL and MIT have a big speaker where they can reach a lot of people, which is hard to do as a small startup.”**

LOOKING AHEAD

Dr. Zraggen sums up the experience of taking his idea from academia into industry as “crazy and fun.” Like any startup, they’ve had their challenges, such as having to shift out of the academic mindset and adopt a more business-centered mentality. Dr. Zraggen says of being a CEO that he’s had to “learn to let go a little bit and trust other people,” becoming more of a generalist. These days, he needs to “juggle a little bit of everything.”

Moving forward, Dr. Zraggen says Einblick is shifting toward a more personalized, single-user approach. In the early days they “sold to larger enterprises who installed the software in their own environments,” but right now Einblick is “switching over to having a free version online that everybody can just make an account and use.” He’s excited about this transition because it will allow them to share their tool with people all over the world and see what users do with it.

Ultimately, Einblick aims to offer data-visualizing solutions to industry members and individuals alike. To do that, Dr. Zraggen concludes they will continue “spreading the word and getting more and more people interested in what we’re doing” with the ongoing resources and connections provided by CSAIL Alliances.

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